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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,866	09/29/2000	Ron Maurer	1000735-1	3319

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

WU, JINGGE

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 11/04/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,866

Applicant(s)

MAURER, RON

Examiner

Jingge Wu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-4, 14-19, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) 5-13 and 20-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Applicant's election with traverse of invention I in paper No. 8 is acknowledged. Applicant's argument in paper No. 8 is persuasive, the restriction requirement is expressly withdrawn. Accordingly, claims 1-29 are now presented for prosecution.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-2, 16-17, and 29 are rejected under 35 U.S.C. 102(a) as being anticipated by US 6031581 to Harrington (a reference of PTO 1449).

As to claim 1, Harrington discloses a method of reducing chromatic bleeding artifacts in a digital image, comprising:

modifying chrominance values of at least some pixels in the digital image (page 5, 0037), the pixel being modified according to its luminance values and chromatic dynamic range (col. 5 lines 5-col. 6 line 15).

As to claim 2, Harrington further discloses the chromatic dynamic range can be presented as function of minimum and maximum values of local neighborhood (col. 5 lines 5-30).

As to claims 16-17, and 29, the claims are the corresponding apparatus and article of manufacture claims to claims 1-2, respectively. The discussion are addressed with regard to claims 1-2.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 14-15, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrington in view of US 6235754 to Harrington (Harrington1).

As to claims 4 and 19, Harrington does not explicitly mention modifying pixel's chromatic value high than the minimum of the local neighborhood when the pixel having a high luminance value, and not modifying the pixel when the pixel has a small dynamic range.

Harrington1, in an analogous environment, discloses modifying pixel's chromatic value high than the minimum of the local neighborhood (col. 6 lines 54-57, col. 8 lines 1-29) and not modifying the pixel when the pixel has a small dynamic range (col. 6 lines 54-57, col. 9 lines 36-38).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of Harrington1 in the method of Harrington in order to reduce the color bleeding (Harrington1, col. 1-2).

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As to claims 14 and 28, Harrington and Harrington¹ does not mention reconstruction image and the chromatic dynamic range is determined from subsampled chrominance values.

Examiner takes Official Notice that those features are notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of subsampling and reconstructing the image in the method of Harrington in order to reduce the computation load of the method.

As to claim 15, Harrington and Harrington¹ discloses all limitations except interpolating the chrominance channels.

Examiner takes Official Notice that interpolation of a chrominance channel is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of interpolation in the method of Harrington in order to reduce the computation load of the method.

4. Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrington in view of US 5638138 to Hickman and US 5373327 to McGee et al.

As to claims 3 and 18, Harrington does not mention scaling the chromatic value via the ratio of C'/C .

Hickman, in an analogous environment, discloses scaling the chromatic value of the chrominance components C_r and C_b according to the ratio of luminance (col. 5 lines 30-35).

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McGee, , in an analogous environment, further discloses the ratio is the chromatic value to keep the hue unchanged (col. 4 lines 9-35 note that X^* (Cr-512) can be changed to a form $Cr'/C=1/X$).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the schemes of Hickman and McGee in the method of Harrington in order to maintain high quality of the image by keeping the hue of the image unchanged after color correction (Harrington, col. 1).

Allowable Subject Matter

5. Claims 5, 13 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6-12 and 21-27 depend from claims 5 and 20 are, therefore, objected.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5742410 to Suzuki, US 6198841 to Toyama et al, US 5537228 to Dillinger, and US 5418574 to Miyabata et al. disclose methods for correcting color bleeding.

Contact Information

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7. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

